



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

done with the eel, and hereafter will repeat all the old and make new experiments upon it*.

This fish raises its head every few minutes above the water to respire.

I have seen negroes take hold of it, at first very cautiously, receiving many light shocks, but presently have grasped it hard and taken it out of the water.

There is a kind of light wood through which the eel cannot shock.

Mrs. Behn, in her Oroonoko, gives a description of this fish, which she calls the numb-eel, and says it is taken in the river Surinam.

From the above experiments, partial as they are, I leave you, sir, to judge how far the torporific and electric fluids are alike.

I am, with the greatest respect and esteem,

Your most humble servant,

South-Carolina, }
October 8, 1782. }

HENRY COLLINS FLAGG.

N° XIV.

To DAVID RITTENHOUSE, *Esquire*, from JOHN PAGE, *Esquire*.

Williamsburg, December 4, 1779.

DEAR SIR,

Read May
2d, 1783.

I HAVE often thought there was a strong resemblance between some of the phenomena of electricity and magnetism, and fancied I saw something like the two electricities in the attraction and repulsion of
Z the

* I had not been long in South-America when I made my observations; soon after which, the necessary avocations of my profession, together with that relaxation of the mental powers generally consequent upon the lassitude of body incident to the inhabitants of warm climates, indisposed me to the farther prosecution of experiments I am now mortified at not having made.

the two poles. I have amused myself with supposing that magnetism is only a species of electricity, whose *matter* is as yet not discovered by human sight; as that of electricity was, when a few years ago, it was perceivable only by its effects in attracting or repelling light bodies, as magnetism now is in attracting or repelling iron. Experiments by which polarity may be given to needles by means of electricity, perhaps, further improved and closely attended to, might throw great light on this subject. I wish we had more cases stated of the effects of lightening and the Aurora Borealis on the needle. But mentioning the Aurora Borealis recalls to my mind, the meteor which was seen at many distant places in Virginia on the 31st of October, at about 6^h 10^m P. M. It was what is vulgarly called a falling star. It fell as seen at Roswell about three or four degrees to the north of west and left a bright trail of light behind it; which extended from the horizon perpendicularly above 7°; unluckily I lost a view of it when falling, but was called out time enough to see the grand and beautiful appearance of its trail of light. It was seen for near 15^m, it was as bright as shining silver, and as broad as the enlightened part of the new moon, when first visible, and about 7° in length. It might be represented by N° 1, when I first saw it, and by the other figures at intervals of about a minute after. Just before it disappeared it resembled the edge of a cloud. The sky was remarkably clear and serene. It appeared in the same manner exactly to several gentlemen above an hundred miles from Roswell, but on a different point of the compass. I have not yet had so accurate an account of its bearing as to ascertain its height and distance. Did you see any thing of it?



I am, dear sir, yours most sincerely,

JOHN PAGE.

From DAVID RITTENHOUSE, *Esquire*, *to* JOHN PAGE, *Esquire*.

DEAR SIR,

Philadelphia, January 16, 1780.

Read May
2, 1783.

I DESIGN to give you my thoughts on Magnetism in some future letter, at present I shall confine myself to the subject of the latter part of yours of the 4th of December last.

The extraordinary Meteor you mention was likewise visible here, the air being serene and clear. I did not see it until the bright streak was become very crooked, it then bore S. 70° W. nearly, from Philadelphia, and comparing this course with that observed by you, I find it must have fallen on or near the Ouasiota mountains mentioned in Lewis Evans's map, about 480 miles from Philadelphia and 365 from Williamsburg. And taking its altitude 7° as observed by you, adding $2\frac{1}{4}$ degrees for the depression of that place below your horizon, its entire apparent altitude above the spot where it fell was $9^{\circ}\frac{1}{4}$, which, on a radius of 365 miles, will be 61 miles perpendicular height. The breadth of the luminous vapour was, I think, in some places, when I saw it, not less than a quarter of a degree; this at 480 miles distance must have been at least two miles. It was certainly a grand appearance near the place where it fell, if any human eye was there.

May not these shooting stars be bodies altogether foreign to the earth and its atmosphere, accidentally meeting with it as they are swiftly traversing the great void of space? And may they not, either electrically or by some other means, excite a luminous appearance on entering our atmosphere? I am inclined to this opinion for the following reasons: 1st. It is not probable that meteors should be generated in the air at the height of 50 or 60 miles, on account of its extreme rareness; and many falling stars, besides this, are known with certainty to have been at very

great heights. 2dly. Their motions cannot be owing to gravity, for they descend in all directions, and but seldom perpendicularly to the horizon. Besides, their velocities are much too great. This meteor would not have fallen by the force of gravity, from the place where it first appeared, to the earth, in less than two minutes of time; nor in less than ten seconds, if we suppose it impelled by gravity from the remotest distance. They are nevertheless affected by gravity in some manner, for I cannot find that any one was ever observed to ascend upwards in its course.

It is true that difficulties will likewise occur, if we suppose them to be foreign bodies of sufficient density to preserve such great degrees of velocity even in passing through the atmosphere, for it may be asked why do they not frequently strike the earth, buildings, &c.

Perhaps they are generally, if not always, exploded in passing through the air, something in the manner that filings of steel are exploded in passing through the flame of a candle. And at the same time that they afford us occasion to admire the variety and immensity of the Creator's works, they may perhaps produce some important and necessary effects in the atmosphere surrounding this globe, for the welfare of man and its other innumerable tribes of inhabitants.

I am, dear sir, your affectionate friend,

And very humble servant,

DAVID RITTENHOUSE.

Description